



Complete Summary

GUIDELINE TITLE

Duration and frequency of haemodialysis therapy.

BIBLIOGRAPHIC SOURCE(S)

Duration and frequency of haemodialysis therapy. Nephrology 2005 Oct;10(S4):S71-4.

Duration and frequency of haemodialysis therapy. Westmead NSW (Australia): CARI - Caring for Australians with Renal Impairment; 2004 Dec. 9 p. [19 references]

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

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SCOPE

DISEASE/CONDITION(S)

End-stage kidney disease (ESKD)

GUIDELINE CATEGORY

Assessment of Therapeutic Effectiveness
Management
Treatment

CLINICAL SPECIALTY

Family Practice
Internal Medicine
Nephrology
Nursing

INTENDED USERS

Allied Health Personnel
Nurses
Physicians

GUIDELINE OBJECTIVE(S)

To review the available evidence for the benefit of prolonged duration and more frequent hemodialysis

TARGET POPULATION

Patients with end-stage kidney disease (ESKD) who are approaching hemodialysis

INTERVENTIONS AND PRACTICES CONSIDERED

Evaluation

Patient education

- Advantages of prolonged and more frequent dialysis
- Advantages of home (including nocturnal) dialysis
- Short daily dialysis

Management/Treatment

1. Home hemodialysis
 - Prolonged (6-8 hours) hemodialysis
 - More frequent dialysis than thrice weekly
2. In-center hemodialysis

MAJOR OUTCOMES CONSIDERED

- Dialysis adequacy
 - Urea reduction ratio
- Hospitalization at 1 year
- Patient acceptance rate
- Quality of life
- Mortality

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Databases searched: Medical Subject Headings (MeSH) terms and text words for dialysis were combined with MeSH terms and text words for short daily, nocturnal, frequency and duration, and then combined with the Cochrane highly sensitive search strategy for randomized controlled trials. The search was carried out in Medline (1966 – February Week 1 2004). The Cochrane Renal Group Trials Register was also searched for trials not indexed in Medline.

Date of searches: 18 February 2004.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Levels of Evidence

Level I: Evidence obtained from a systematic review of all relevant randomized controlled trials (RCTs)

Level II: Evidence obtained from at least one properly designed RCT

Level III: Evidence obtained from well-designed pseudo-randomized controlled trials (alternate allocation or some other method); comparative studies with concurrent controls and allocation not randomized, cohort studies, case-control studies, interrupted time series with a control group; comparative studies with historical control, two or more single arm studies, interrupted time series without a parallel control group

Level IV: Evidence obtained from case series, either post-test or pretest/post-test

METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses
Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Comparison with Guidelines from Other Groups
Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Recommendations of Others. Recommendations regarding duration and frequency of hemodialysis therapy from the following groups were discussed: Kidney Disease Outcomes Quality Initiative, British Renal Association, Canadian Society of Nephrology, European Best Practice Guidelines, and International Guidelines.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Definitions for the levels of evidence (I–IV) can be found at the end of the "Major Recommendations" field.

Guidelines

No recommendations possible based on Level I or II evidence

Suggestions for Clinical Care

(Suggestions are based on Level III and IV sources)

- The advantages of prolonged and more frequent dialysis should be discussed in depth with patients approaching dialysis, and the advantages of home haemodialysis should be presented in detail. While 6–8 hours each night, five or six nights weekly, might be optimal therapy, it may be difficult to persuade

- patients to accept more than (for example) 7 hours each night on alternate nights. Even this would be an improvement on current regimens.
- Short daily dialysis is also an option.
 - While extending hours and increasing dialysis frequency would be difficult in dialysis centres, it could perhaps be tried in selected patients.

Definitions:

Levels of Evidence

Level I: Evidence obtained from a systematic review of all relevant randomized controlled trials (RCTs)

Level II: Evidence obtained from at least one properly designed RCT

Level III: Evidence obtained from well-designed pseudo-randomized controlled trials (alternate allocation or some other method); comparative studies with concurrent controls and allocation not randomized, cohort studies, case-control studies, interrupted time series with a control group; comparative studies with historical control, two or more single arm studies, interrupted time series without a parallel control group

Level IV: Evidence obtained from case series, either post-test or pretest/post-test

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for each recommendation (see "Major Recommendations").

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

- Appropriate education will be given to patients with end-stage kidney disease who are approaching hemodialysis.
- Dialysis patients fare better when the duration and/or the frequency of dialysis is extended beyond the conventional regimen of around 4 hours, three times each week.
- Compared with short thrice-weekly dialysis, nocturnal dialysis is associated with improved salt and water control, increased solute removal, improved calcium and phosphate control, and a marked improvement in quality of life.

POTENTIAL HARMS

Not stated

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Living with Illness

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

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ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2005 Oct

GUIDELINE DEVELOPER(S)

Caring for Australasians with Renal Impairment - Disease Specific Society

SOURCE(S) OF FUNDING

Industry-sponsored funding administered through Kidney Health Australia

GUIDELINE COMMITTEE

Not stated

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

David Harris, Convenor (Westmead, New South Wales); Merlin Thomas (Prahran, Victoria); David Johnson (Woolloongabba, Queensland); Kathy Nicholls (Parkville, Victoria); Adrian Gillin (Camperdown, New South Wales)

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

All guideline writers are required to fill out a declaration of conflict of interest.

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the [Caring for Australasians with Renal Impairment \(CARI\) Web site](#).

Print copies: Available from Caring for Australasians with Renal Impairment, Locked Bag 4001, Centre for Kidney Research, Westmead NSW, Australia 2145

AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- The CARI guidelines. A guide for writers. Caring for Australasians with Renal Impairment. 2008 Jul. 6 p.

Electronic copies: Available from the [Caring for Australasians with Renal Impairment \(CARI\) Web site](#).

PATIENT RESOURCES

None available

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